

Conditions for new ways of organizing, using ICT: dealing with psychological dilemmas

FRANK LAMBRECHTS / KOEN SIPS

Abstract

One of the ways by which contemporary organizations deal with increasing demands for flexibility is by using new information and communication technologies (ICT). As these new technologies make it possible to organize work differently, f.i. independently of place and time, new organizational configurations and work forms are getting born. In general these can be labeled as temporary collaborative networks, aimed to share expertise, costs, and markets.

An important agenda for organization researchers then becomes by which conditions these temporary networks are supported. In this paper three critical conditions are identified and discussed: 1) psychological boundaries (Hirschhorn & Gilmore, 1992) in the new jobs of individuals and groups, 2) psychological dilemmas caused by the complexity and temporariness of collaboration in network relationships, and 3) new 'images of organisations' (Morgan, 1989) or 'mental constructions' that can serve as common ground for organizational members to visualize a desired future and as a working model to conceptualise new ways of working.

Collaborative networks are thus not a given, automatically realized once ICT is used. It is a delicate and challenging organizational activity that needs constant support. The use of one or more network conveners can be beneficial in this respect. The paper advocates the use of such role, which differs from more classical leadership, and outlines some specific competencies for facilitation in temporary collaborative settings.

Finally it is argued that classical motivational factors for participation and membership in traditional organizations are replaced by characteristics of the relational processes that evolve in temporary networks.

1. Introduction

Nowadays, companies are forced to evolve quickly because of an ever-growing environmental variation. The market demands shorter delivery terms, higher quality and more customer-oriented products and services (mass-customization). Corporate world is characterized by a large diversity in respons to an increasing need for flexibility. To meet this demand of flexibility, corporate processes are redesigned with the help of new technologies. Production processes are being automated and other logistic concepts arise (just in time, just in case).

Concepts of organizing are seeing major shifts: from spatial concentration towards deconcentration, from consumer weakness towards consumer power, from regulation towards deregulation, from machine capital towards knowledge capital, from tangible towards imaginary and from 'order' to 'chaos'.

With the help of information and communication technology (ICT), it is technically possible to organize without dependence on either time or place. Professionals can be characterized as nomads: he/she seems to work whenever or wherever. With the rise of Internet and e-mail, an evolution from teleworking towards networking appears. Co-workers are expected to be multi-employable. A process of lifelong learning in learning organizations replaces the segmentation between 'learning' and 'doing'. A movement towards more 'temporality' is ever present in our society. One may think for example of the explosive growth in interim-labor. More and more people use and develop their specific competencies in temporary collaborative networks. Therefore, the adaptation and learning abilities of co-workers becomes important.

A clear trend in corporate life is the realization of everything that is technically possible: 'Let's not miss out on this one and fall back'. New technologies of course have their advantages. For instance, think about the speed of information distribution and the increasing availability of all kinds of data. Technological innovations keep on proliferating.

However, apart from this 'hard' view on organizing (computer scientists, IT specialists and engineers), there is also a 'softer' human perspective (behavior scientists like psychologists and sociologists) needed to complement the technical discourse. The influence of new technologies on organizing should not be considered from one perspective only: 'What technically can, must be!'. The role or added value of the organizational psychologist consists exactly in emphasizing this 'softer' perspective because it elicits some bottlenecks or dilemmas in e-organizations. An important task then is to investigate the feasibility and conditions to realize temporary collaborative networks facilitated by ICT. The 'hard' and the 'soft' perspective are two realities that are equally valid and even complementary. Consequently, the call for integration is present.

2. Towards another reality of working together: temporary collaborative networks

New organizational activities emerge because ICT (and especially the Internet) lowers the transaction costs of organizing. Because of this, many organizations outsource their non-core activities and get smaller. These smaller (independent) enterprises are almost forced to work together in (Internet) networks to compete with larger, often merged, multinationals and to face the gigantic competitive pressure of globalization (Caspers, Hosman & Verkerk, 1999). That's why more and more companies (suppliers, customers and even competitors) link through temporary networks facilitated by ICT to share each other's skills, costs and markets.

Apart from ICT, the trend towards flatter organizational structures (decentralization with fewer levels of report and command) can be seen as an important driving force for new organizational configurations in which specific competencies from different companies are grouped in a 'competency network' (see figure 1) to exploit a market opportunity the individual players cannot realize alone. The collaborative network exists just as long

as the mutual goal is reached. The parties involved configure and reconfigure continuously.

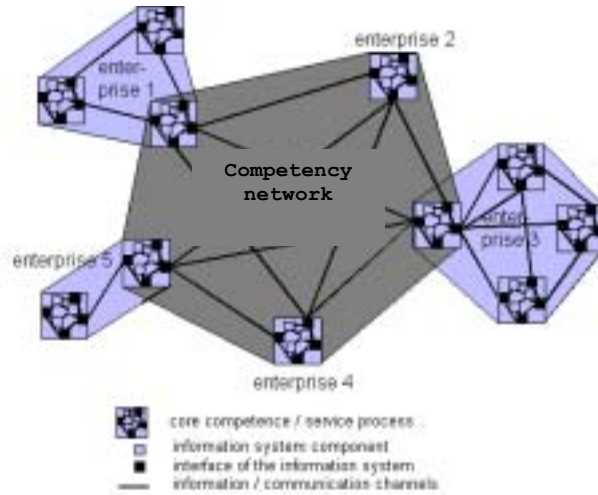


Figure 1. Competency network as integration of core competencies (modified from Zimmermann, 1997)

In a turbulent and complex environment with high uncertainty, collaboration in networks offers big advantages over traditional organizations in terms of higher ability to adapt (Caspers et al., 1999). Organizing and change in networks resemble the three processes of the evolutionary model of Darwin: variation, selection and retention (Weick, 1979).

Variations that are expected to increase adaptation are selected and retained. The higher the variation is, the higher the chance to an adapted renewal. Important to notice here is that variation and retention are opposed processes: variation is necessary, the more it is reduced, the smaller the ability to adapt. With retention, the selected behavior is retained or 'reified', with variation it gets 'de-reified' (Weick, 1979; cfr. unfreeze, change and freeze as noted in Lewin, 1951).

Next to similarities, the evolutionary model applied to networks reveals an important difference too. By increased competition and globalization, there are more alternatives to choose from to form a particular (business) relationship. The most effective relationship (in terms of lowest transaction costs) in a given situation, is selected and retained. The standards of Internet entail a greater variation because, technically speaking, companies can collaborate easier. The more parties in the network, the more variation, and the higher it's flexibility and the ability to adapt (Caspers et al., 1999). By means of ICT and Internet, companies can select faster, easier and more often and therefore more regularly change relationships or 'switch' (Mowshowitz, 1997).

The difference is situated in the meaning of the term selection. In the evolutionary model, to make a selection implies that other alternatives 'extinct'. In a network, we better talk about 'shifting to the background'. To reach a certain common goal, some relationships are temporarily strengthened and others are weakened or put on 'stand by'. Some relationships come to the foreground, others stay in the back. The mechanism of concentration, and hence also the visibility, of relationships in networks can be compared

to the figure-background effect in perception and attention processes as studied in Gestalt psychology.

Collaboration in networks imply that it's no longer easy to think in terms of 'inside' and 'outside', or 'suppliers' and 'buyers'. The 'classic' organization chart is out of date. Boundaries become more blurred which makes this form of organizing difficult to imagine. Therefore, finding new organizational forms in the e-era becomes really a matter of 'reframing' (Watzlawick, Weakland & Fisch, 1974). We have to let our human imagination speak to find new images for these new ways of organizing (Morgan, 1993). Understanding virtual organizations, imaginary organizations or boundaryless organizations is a matter of conceptualizing human coordination in temporary networks. The question then becomes to investigate the underlying processes that are typical for such temporary 'merges' of people who collaborate, enabled by ICT, to reach a common goal. A first organizational process that we want to address is boundary blurring.

3. Collaborating in networks: boundary blurring

Boundaries are necessary: they divide people, processes and production in a healthy manner. They keep things clear and distinguished. Without boundaries, the organization would cease to exist (Ashkenas, Ulrich, Jick & Kerr, 1995). Therefore, boundaries cannot simply be removed. Instead, they have to be made more permeable to ensure a larger mobility both throughout one organization as between organizations. Instead of talking about boundaries as fixed and insurmountable, Arkansas et al. (1995) propose an organic, biological metaphor of boundaries as permeable, flexible, changeable membranes in a living and evolving organism. A constant challenge for management is to determine how permeable boundaries should be and where they should be put.

ICT can loosen the traditional boundaries of hierarchy, function, organization and geography. Venkatraman (1994) suggests that participation of an organization in a network implies five successive processes of reorganization that are induced by ICT.

In a first stage, efficiency of existing functional areas, like production, manufacturing, administration, sales, etc. can be improved. Essentially, ICT here offers internal and independent solutions.

In a second stage, the processes in the functional areas are linked to improve efficiency, effectiveness and quality of the operations. So, boundaries between functions become more transparent.

In a third stage this increased transparency leads to the identification of activities that don't add value and to the identification of new ways of performing a certain process. Essentially, primary and supporting organizational processes can be rethought and redesigned with the help of ICT.

In a fourth stage, network relationships are established or improved within the organization and with outsiders. Customers and suppliers support the collective processes they share with the organization. The boundaries of the organization are hard to pin down now. As a consequence, integration of activities across boundaries leads to higher efficiency and effectiveness.

In a last stage the image an organization has of itself and of the way it adds value to 'stakeholders' is changing.

This thinking in stages – to loosen boundaries via ICT – is nice, but psychologists see other, rather ‘psychological’ boundaries that are important too when ‘traditional’ boundaries are made more permeable. *These boundaries are not visible in an organization chart but are to be found in the heads of managers and employees* (Hirschhorn & Gilmore, 1993). They constantly have to be ‘enacted’ or ‘actualized’ in the relations between a manager and his superiors, inferiors and equals (Weick, 1979). Further on in the text, a possible competence profile of the leader of temporary collaborative networks will be sketched (see paragraph seven). Every psychological boundary can be recognized by the feelings it incites. According to Hirschhorn & Gilmore, every working experience contains four boundaries that are interwoven and interact dynamically.

3.1 The ‘authority boundary’

The authority boundary psychologically determines *who’s in charge of what*. Necessary tensions are: ‘How to lead but still be open to criticism?’, ‘How to follow but still challenge your superior?’. When people effectively work together on this boundary, feelings of openness and trust dominate. Inferiors have space to take initiative and leaders feel supported and challenged. Feelings of distrust, rigidity, passiveness and rebellion take over when collaboration on the authority boundary is limping.

3.2 The ‘task boundary’

The task boundary psychologically determines *who does what*. Tensions are: ‘How to be depended on others you do not control?’, ‘How to specialize but still understand other people’s job and respect it?’. When task relations with co-workers are good, people feel proud of their job, comfortable with their dependency on others, and trust in their own and others’ competencies. When a work group encounters problems in defining the task, in distributing responsibilities, and in assigning resources, individual members begin to feel unsure, anxious and incompetent. They are no longer able to perform their work and sometimes even feel ashamed of their job.

3.3 The ‘political boundary’

The political boundary psychologically determines territories of power: *what’s in it for us and what’s not*. Necessary tensions are: ‘How to defend your interests without undermining the whole organization?’, ‘How to differentiate between win-win and win-lose situations?’. At their political boundary, people are confronted with the challenge to protect their own interests without damaging the efficiency and coherence of the organization as a whole. When groups in an organization effectively do this, people will most of the time feel ‘powerful’. Employees believe they are treated fairly and rewarded according to their contribution. But when political relationships sour, feelings of powerlessness dominate. Members of a work group can feel denied, not represented in important decisions, or even experience a feeling of exploitation: ‘We are only pawns in a game of which we don’t know the rules’.

3.4 The 'identity boundary'

The identity boundary psychologically determines *who does and who does not belong to 'our' group*. Necessary tensions are: 'How to feel pride without devaluating others?', 'How to be loyal without undermining outsiders?'. People can be loyal to their own group, be proud to belong to it and still show healthy respect for others. But when this 'team spirit' is accompanied by contempt and distrust for others who do not share the same values or experiences, the identity boundary can tear relationships apart.

In these four psychological boundaries, the constructs of trust, loyalty and identity appear manifold. Exactly these constructs make that people who work together in temporary collaborative networks, are confronted with different psychological dilemmas.

4. Trust, loyalty and identity: Psychological dilemmas

New technologies create a lot of possibilities, but it's still people who have to make the temporary network a coherent and meaningful whole with a certain amount of cohesion. This cohesion can be described more accurately with psychological concepts such as trust, loyalty and identity. They are the core constructs of networks.

Collaborating in networks depends strongly on the presence or absence of trust among the participants from different organizations. Trust seems to be a crucial building block for parties who know very little of each other and want to start to collaborate. Immediately the paradox becomes very clear: to trust each other with a minimum amount of information. Through ICT, it is possible to exchange information fast, but people have to be motivated to share relevant, and sometimes delicate or even painful information.

The tough part of collaboration in a network comes from the loss of what Van Aken (1998, p.13) calls the 'classical triangulated unity' of organizing: unity of property, unity of control and unity of identity and loyalty. These are replaced by a triple distribution.

Distributed property means that all parties are owner of the apparent (and appearing) goals within the network. Opposite interests between partners is a given. That's why questions of ownership constantly have to be answered. Important in this respect is the search for mutuality.

Distributed control means that individual partners can decide on the resources they bring into the collaboration. The whole is managed in a distributed way. Therefore, in order to obtain good collaboration, the quality of the dialogue between the partners involved needs to be evaluated permanently.

Distributed identity and loyalty point to partners who bring in and maintain their organization identity in the collaboration. They remain loyal to their home organization, which can lead to the pursuit of conflicting goals and interests and a limitation of the engagement towards the whole. *Because of this, the competencies of the network can become less than the sum of competencies of the separate home organizations.*

Loyalty and trust are two concepts often associated with each other. However there is an important difference between the two. Loyalty has to be understood as *being faithful to an engagement*: 'Because I have made an engagement to do something (not to do something), I do (don't do) it'. That's loyalty. But being loyal to someone doesn't mean I trust him/her. In network-like structures the complexity of collaboration can be partly reduced by making use of juridical contracts in which everyone's responsibilities and qualifica-

tions are clearly stated. The question is whether such a contract offers, apart from the reduction of complexity, a basis for creating loyalty and trust too. Surely one might say that building in *certainty* by means of a contract is exactly a sign of distrust.

Which kinds of trust can occur in temporary collaborative networks? We consider mainly two complementary forms of trust: swift trust and institutional trust.

Swift trust is an 'impersonal' or depersonalized form of trust associated with temporary systems (movie and theatre crews, cockpit crews, surgeons etc.). It is for the most part based on action, competence, education and training as a professional (Meyerson, Weick & Kramer, 1996). Every professional is expected to have the competencies needed and to take on responsibility in his/her functional area. This forms the basis upon which they can trust each other without shared experience.

Indeed, there is less time in temporary systems for a more gradual development of interpersonal trust based on cognition, and later, on affection. Swift trust does not develop but rather exists immediately in a temporary group or totally doesn't. It is a form of trust that is imported into a temporary group out of different contexts (team experiences etc.) and is moderated by the culture and personality of the participating parties. This trust is maintained by pro-active behavior (enthusiastic, stimulating behavior) around a common goal. Of course, the participants continually check this image of trust for its validity.

A second form of trust, *institutional trust*, can facilitate the formation and the evolution of temporary collaboration networks. Partners trust each other because they trust an institution that brought them together: 'I trust X who told me Y is to be trusted'. That's why the reputation of this authority is so important. The parties involved suppose there has been an intense selection to come to collaboration: they assume that reputations, organizational cultures etc. have been checked and compared by the institution to obtain a working whole.

Institutional trust can facilitate the development of other forms of trust (among which swift trust) because there already is a base (of trust) to start from. But institutional trust can also work inhibiting because of the ability of the authority to sanction and because of contracts that have to be met rigorously (Rousseau, Sitkin, Burt & Camerer, 1998).

In the following sections we address three psychological dilemmas that people have to (learn to) handle or manage when they collaborate in temporary networks facilitated by ICT.

4.1 Tightly coupled *versus* loosely coupled: managing interdependencies

In a network where constant reconfigurations are manifold (according to the project), the development and maintenance of good relationships with (potential) collaboration partners is becoming ever more important. Consequently, an important organizational skill concerns finding common ground between the different (interests of the) parties (Gray, 1988, mentioned in Bouwen & De Witte, 1996). The pragmatic question we pose is *how can they do this? How can parties of a temporary collaboration network construct just enough cohesion to function as a meaningful whole? Which minimal criteria must be in place to insure that the network doesn't fall apart all together?*

To get some information on this topic, we turned to the classical work of Schein (1985) on organizational culture. Here, Schein (1985) describes a few criteria a group (of individuals or organizations) has to meet to be able to function as a meaningful, coherent so-

cial system. The process of becoming a group is characterized by the growth and the maintenance of the relationships between collaborating individuals or organizations and the actual realization of their goal(s).

According to Schein (1985), the 'culture' of a group will emerge from the *shared processing* of two sorts of problems: external adaptation and internal integration problems. External adaptation problems have to do with the primary task and mission of the group: 'What is the *reason to be* of our group?'. Internal integration problems deal with the (in)ability to work as a group: 'Which processes facilitate cohesion, how can a group build and maintain itself?'. Both kinds of problems and the mechanisms or underlying processes to solve them are very closely linked.

To deal with external adaptation and internal integration problems, networks can be 'tightly coupled *versus* loosely coupled'. Hence, a first dilemma is imposed. How tight does the network have to become in order to reach common ground to work cooperatively as a social system? The difficulty is that by the time the necessary cohesion is reached, the 'reason to be' of the temporary network can be already over. The essence of a temporary collaborative network precisely exists in coming together quickly, swiftly, using the market opportunity, disband and reform in a new temporary constellation.

Because the individual organizations (cultures) collaborate in a network, they will continually adapt to each other. Indeed, an organizational culture is constantly 'in-the-making' (Weick, 1979). In a collaborative network, people have to co-create a shared culture very quickly. Also to come to exchange crucial information and to reach enough depth to develop specific network competencies for the project at hand, the amount of interdependence between the parties involved needs to be carefully chosen and managed. We can raise the question: '*How can they do this taken into account the necessary processing that takes time and maintenance; which interdependencies have to be managed and coordinated?*'.

4.2 Opportunistic shallow conversation without engagement *versus* open, deepening dialogue with commitment

Social constructionists (see f.i. Bouwen, 1994, 1996), don't see an organization as a given, but rather as something which is constantly being build by interacting parties. Every party defines her relationship with the other parties from one's own perspective. To get to a shared social reality or 'shared meaning', the separate parties negotiate their different perspectives. This negotiating ideally takes place by dialogue. Consequently, we stress the importance of the quality of dialogic processes between the different parties. It's their responsibility to continuously evaluate and maintain a 'high' relational quality through open communication (Bouwen, 1994, 1996).

A second dilemma is imposed here: Can the quality of dialogue processes be guaranteed in a network characterized by a high temporality, opportunism and geographical dispersion? Parties are compelled to communicate mainly electronically (Internet, e-mail), and in some cases they never meet each other face-to-face once. Can a mutual basis for trust be created in such cases? Handy (1995, p. 46) informs us that trust implies personal contact: 'Trust needs touch'. Future organizations can be compared with 'clubs'. The organization is becoming a place where offices can be reserved for (socialization) activities (meetings, eating etc.). Offices are no longer bounded to certain people; the 'personal'

work place is disappearing. It is clear that by this trend, chances for personal contact decrease, which may influence the conditions for communication.

In some cases there doesn't need to be trust in order for shared action to emerge. The common goal and the common competency can serve as coordination mechanisms that guarantee some cohesion. For instance think about a football team of which the players cannot stand each other and still play a stunning match. Still, in the longer run, a combination of loyalty to goal and relation will be more promising. The question is whether new communication media can sometimes not be a burden rather than a gift to promote open and authentic communication. Because it is stripped from contextual information (like non verbal cues f.i.), e-mail can easily polarize discussions. Experience learns that it can be very difficult to get back from debate to a dialogical mode of communication in 'cyberspace'. Also, because electronic communication is mostly limited to short messages, the interaction often remains superficial and can easily become opportunistic, rather than deepening and constructive.

4.3 Continuity and stability *versus* dynamics of multiple memberships

According to the social constructionist perspective, changing means that the mutually created construction of meanings (organization) is questioned. Parties negotiate new meanings and as a result of this process a new social construction emerges. The changing composition of temporary collaborative networks implies that there has to be a simultaneous social reconstruction or redefinition through a negotiation process.

Here a third dilemma arises: 'Continuity and stability in network membership *versus* frequent entrance and exit of multiple memberships'. *How can this social reconstruction be sufficiently negotiated when parties so easily and frequently change?* The negotiation of different parties to arrive at a shared perspective costs a lot of time. This doesn't seem to be in line with the temporary nature and dynamism of a network. Technically spoken, new constructions can easily be created, but the question is whether the underlying negotiation process and social changes can follow this speed.

The three dilemmas are closely linked and call for relational construction rules: 'How can people co-construct a temporary collaboration network?'. Can a leader (or more than one) guide or facilitate these processes? In paragraph seven a competency profile of such a convener will be addressed.

In the next section we further discuss a recurrent theme in the dilemmas above: multiple identity or multiple membership challenges.

5. Identity and identification

An example of a temporary collaborative network is given in figure 2. It becomes clear in this figure that many boundaries are crossed. This always implicates identity changes or changes in co-created perspectives.

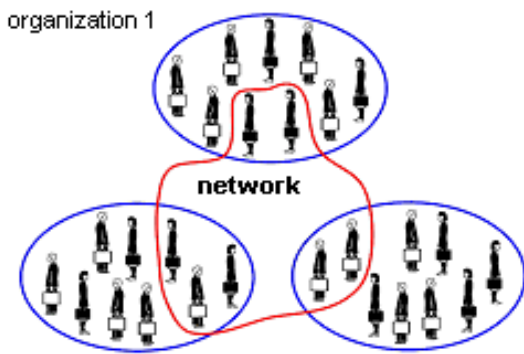


Figure 2. Temporary collaborative network formed by co-workers of three organizations

Four questions arise and are dealt with in succession.

5.1 What does a temporary network identity mean in practice? Which conditions make that a 'temporary network identity' emerges or not?

Albert and Whetten (1985, mentioned in Gioia, 1998) talk about three essential conditions that have to be fulfilled to be able to speak of an 'organization identity': centrality, distinctness and continuity.

Applied to a temporary collaborative network this means that a 'network identity' is 'that what' organization members see as *central* to the network. In most collaborative network settings this is the 'reason to be' – often defined as a shared opportunity or problem: 'Alone we cannot use the market opportunity/solve the problem, together we can'.

The *distinguishing feature* of a network in our view is the *specific collection of competencies* of the partners that can be linked. As a result, the potential to react fast to opportunities is much higher as in a 'normal' organization.

Participants in the network can also see this collection of competencies as a *permanent characteristic* that connects the actual network to the past and probably to the future. However there clearly is a problem regarded the continuity of ICT mediated networks. The network is quickly formed to disappear again when the objectives are reached, and reconfigures to make the most out of a new opportunity. So, usually the connection between past and future is weak or even non-existent.

The question then becomes whether the two first elements of organization identity – centrality and distinctness – are sufficient conditions to build a network identity. Moreover, an identity that is strong enough to handle conflicts *and* to stress interdependencies simultaneously; furthermore, an identity with which members can identify. If the identity appears not strong enough, we suggest that one or more network conveners can help manage the conflicts and interdependencies, and provide a frame to co-create a more shared perspective (see section seven). Also in project teams within organizations, there is a project leader who stresses the 'project identity' if the team members deviate too much from the project goals, and he also plays a moderating role if conflicts arise.

5.2 How can network members really identify themselves with the network?

Because members have to commit themselves to a common goal, a motivational problem may occur. Collaborating members generally identify with their home organizations, which can reduce the effort and motivation towards the common goal of the network (Van Aken, 1998). If the network identity isn't strong enough, it will become very hard for members to identify with the network and, consequently, to feel motivated to make an effort for the whole. The same phenomenon also arises within an organization where members identify more with their own division (for example production, R&D etc.) than with the whole of the organization.

A form of identification that can appear in a network is called *apathetic identification* (Ducherich, Kramer & McLeanParks, 1998). This implies the risk that individuals cannot define themselves in terms of the network identity (low identification), nor in terms of their distinctiveness from the network (low de-identification). The motivation to be part of a network can be very low indeed because there is always the home organization identity to fall back on. Yet, it is important to note that low performance in the network can also harm the reputation of the home organization (and the person him/herself representing the company). Member organizations may therefore, change their representation or correct a representative's behavior. Accordingly, an interesting hypothesis is that the degree of membership to the home organization can be a function of performance in the network.

Motivation can also be very high when the temporary network is seen as an opportunity to undertake action that one wouldn't dare to take alone because the risk is too high. Therefore, it may be important to make the temporary offer both challenging and 'safe' enough for potential participants.

Together with apathetic identification, also *under-identification* can occur (Ducherich, Kramer & McLeanParks, 1998). The member knows that the membership to the network is only temporary. In a way, it can happen that he/she protects him-/herself psychologically by not committing to or identifying strongly with the temporary constellation. This can have negative effects on the results of the network but can be regarded in a positive way too as a personal psychological defense mechanism.

5.3 What is the influence of membership in a network on the individual organizations' identities?

The individual organizations that are part of the network open their boundaries (in a limited way) to other companies. According to Kanter, Stein & Jick (1994), changes at the boundaries of an organization – by relating to external parties – are always linked to internal changes in coordination, structure, role patterns, power dynamics and behavior.

Shifts in power by participating in a network cannot be underestimated. Subtle identity changes and role shifts can appear. Representatives of the individual organizations in a network receive more power in their own home organization because of their additional role.

Participating organizations will have to adapt to each other and this seems to us a hard job considering the own culture and identity of every organization (see supra). We can ask the following question: *How can we create conditions for people to co-create a shared 'script' so that they can deal with this diversity of cultures and identities?*

5.3 What does it mean for the identity of an individual to be included in different networks (multiple and/or simultaneous memberships)?

Boundary blurring constantly raises a question: ‘Who am I, and where do I belong?’. Looking for the answer to this question is an extra source of stress (Schneider, 1999). Careers are no longer characterized by job certainty or lifelong work engagements to one organization.

The contemporary psychological contract between employer and employee shifts – because of the temporary nature of assignments and the increase of project-like work – from a relational towards a transactional contract.

In a relational contract, co-workers identify with the organization through internal promotion, mentoring, socialization, etc. They link a part of their identity to ‘their’ organization by internalizing the organization values (Mirvis & Hall, 1994). People with a ‘we’-feeling towards their organization will answer the question: ‘What do you do?’ with: ‘I work for company X’.

However, in a transactional contract, identity develops more around competencies of the person (Mirvis & Hall, 1994). The answer to ‘What do you do?’ will be ‘I do Y’. Because people build their identity throughout the whole of their lives, and will probably start taking part in several temporary networks, more and more people will give the latter answer.

In the contemporary knowledge society, more and more companies will make a shift to becoming professional organizations where professionals are loyal to their own competencies. People will ask themselves the following question: ‘Where can I best use and develop my competencies?’. In response to this question people *choose* their networks. The binding factors could very well be relational process characteristics: ‘I always do interesting and challenging things in an environment full of variation’. The permeability of boundaries (see supra) can give people the psychological liberty to explore new identities and thus to construct a richer ego.

But for some people (those who do not have the choice!) periodic and unpredictable changes in their job status and degree of membership will create psychological confusion. In addition, constantly changing assignments, and working in different or changing teams, etc. can build up even more stress. Fragmentation and a loss of identity can be the consequence. Where is the ‘breaking point’? When will the answer to the question ‘What do you do?’ turn from ‘I do all kinds of things’ into ‘I do so much things that I cannot even remember all that I do’. A documentary about Silicon Valley illustrates how many people use their competencies in simultaneous networks. Apart from success stories, there were huge problems with stress and burnout (often because of unidirectional transactional contracts).

Before we address the competency profile of the network convener who can play a facilitating and enabling role in the network, and can help people to handle the aforementioned psychological dilemmas, it’s important to take a look at several new images that are congruent with the idea of the temporary collaborative network.

6. Images for new ways of organizing in a temporary collaborative network

Morgan (1986, 1993) can be considered as the father of ‘images of organizations’. Metaphors help us to think and talk about organizational forms and processes. They focus our attention to some core aspects of organizing but are quite selective in this endeavor (Morgan, 1986, 1993): each metaphor sheds light on an organizational phenomenon from a different perspective. In this sense they play a rather *paradoxical role*: they are vital to understanding and highlighting certain aspects of organizations, while at the same time they restrict understanding by backgrounding or ignoring other aspects. In addition, images of organizations can serve as common ground for organizational members to visualize a desired future and as a working model or frame to conceptualize ways of working. In the following sections we want to complement Morgan’s (1986, 1993) images with metaphors we found in management and organization literature to depict ‘new ways of organizing’. We consider these metaphors useful to better understand the functioning of temporary collaborative networks. Keep in mind that these are ‘only’ metaphors, not ‘real’ pragmatic structures. We invite the reader to use his/her imagination to find other compelling metaphors and connect these new images with temporary collaborative networking.

6.1 Organizations as ‘spaghetti’

The ‘spaghetti’ metaphor gives an image of organizations constantly on the move, never the same. At first sight, everything is put together quite chaotically. Still, if we look closer it is possible to extract a distinct element out of the entangled strings and follow it from beginning to end. It is a form of organizing with a minimal amount of rules and procedures. Otticon, a Danish specialist in digital hearing technology, has used this metaphor to conceptualise their new way of working (Swinnen, 2000).

6.2 Organizations as ‘pizzas’

This metaphor imagines an organizational form in terms of a pizza with a lot of salami on top of it (see figure 3).

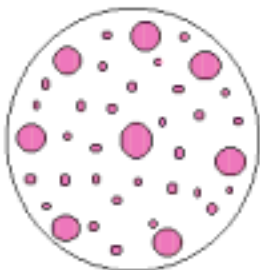


Figure 3. The ‘pizza’ organization (modified from Byrne, 1993)

The circular form indicates that every co-worker is equal and no one dominates others. Every slice of salami represents a cross-functional team or project group that is responsible for managing a business, a geographical area, a function or a core competence in a specific technology or innovation domain. The collaborative interaction takes place at the edges of slices of salami. Each decision, task or exchange in general is a topic of negotiations in the group. These groups do have leaders but not in the traditional sense of the word. We see a shift in leadership roles: from a manager as a boss to a leader as a facilitator (Adair, 1990). The melted cheese forms the 'organizational glue' (culture) that binds teams together. The slice of salami in the centre of the pizza represents the 'pizza' leader. The Danish Otticon has evolved from a 'spaghetti' image to a 'pizza' metaphor (Swinnen, 2000).

6.3 Organizations as 'shamrocks'

Handy (1989) uses the image of a 'shamrock' to talk about the organization of the future (see figure 4).



Figure 4. The 'shamrock' organization

The first leaflet of the shamrock consists of what Handy (1989) calls the 'core staff': managers, technicians and professionals who constitute the core competence of the organization. Bridges (1995) characterizes this core staff as 'companions' rather than as superiors and subordinates. Their salary is dependent on the results of the company. 'Contractors' or external suppliers shape the second leaflet. They support the core staff by performing services previously carried out by separate departments (cfr. outsourcing). These suppliers can either be self-employed individuals or employees from other firms. Their salary is dependent on the performed results too (Bridges, 1995).

The third leaflet consists of the 'contingent labour force' or temporary manpower. Companies usually make an appeal to this category if there is an urgent need to accomplish something. They are paid hourly, daily or weekly on the basis of time worked (Bridges, 1995).

'Customers' form the fourth leaflet. The customer is increasingly performing work previously done by an employee (Bridges, 1995). Examples are self-service petrol stations, cafeterias, IKEA-stores and banks.

6.4 Organizations as 'starbursts'

Quinn (1992, in Morton, 1996) describes a form of organizing that is especially designed to make optimal use of and broaden the creativity and innovativeness of co-workers. He depicts these organizational forms as 'starbursts' (see figure 5).

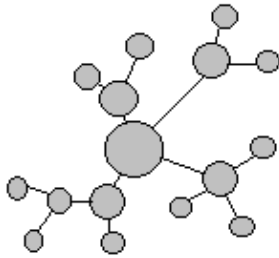


Figure 5. The 'starburst' organization (modified from Byrne, 1993)

Newly developed products or services are being split off from their mother organization in distinct subsidiary companies that are stimulated to grow further on their own (compare also with an exploded star). The mother organization leads the network of subsidiaries but the separate units have the freedom to grow entrepreneurially (Morton, 1996).

6.5 Organizations as 'spider webs'

This metaphor is particularly relevant to conceptualise so-called 'flat' organizations with a little amount of hierarchy. Communication between individuals and groups is often very intensive (Morton, 1996). Quinn (1992, in Morton, 1996, p. 78) notes that the independent elements of such organizations essentially contain the entire collected knowledge of the organization (cfr. fractal structure) and function largely without formal authority relationships. The centre, if it is already there, is mainly engaged in collecting and transferring information from and to the elements rather than generating information.

6.6 Organizations as 'bee-hives'

We can compare collaborative networks with bee-hives, a metaphor initially used by Kelly (1995, in Slagmolen, 1996) in his book 'Out of Control'. He talks about 'hive organizations' or 'swarm organizations' to conceptualise a new way of organizing. The metaphor calls attention to the fact that one or even a few 'producers' can't manage collaborative networks and can't possess all knowledge. This is an argument for the use of more than one convener. The participants of the temporary collaborative network can take on this coordination role (see infra) in a temporary fashion - taking turns - as a sort of 'distributed leadership'.

The separate bees - organizations or individuals - have a much lower intelligence and a more narrow perspective than the beehive as a whole. The swarm - collaborative

organizations or individuals – is more intelligent and can adapt a lot more rapidly in comparison to the separate constituent parts (see Gestalt Psychology). This implies that rationality, in the sense of controlled forecasting and planning, will quickly reach its limits (Mintzberg, 1994, in Igarria & Tan, 1998).

Multiple realities are possible, innovation will arise on several occasions and at different spots, and knowledge is distributed among participating organizations. Managing becomes negotiating: different, sometimes even opposing, perspectives have to be managed and continuous feedback and evaluation becomes necessary. Similar as in the bee-hive, sophisticated communication and coordination patterns are used.

6.7 Organizations as ‘piranhas’

The ‘piranha’ metaphor shows us a possible ‘danger’ of temporary collaborative networks. It shows the potential strength and, above all, the possible *aggression* of highly specialised organizations and individuals that operate in networks. We don’t want to inspire organizations to be more aggressive. However, we see these competitive networks – often facilitated by new ICT – become a reality.

The parties in such a network can react flexibly, quickly and aggressively to customer needs and to opportunities and threats. They can quickly form and reform relations with other *piranhas* in the network what results in a capability to continuously adapt to changing circumstances. It is this flexible co-operation that gives the network its unique power. For traditional companies it’s getting more and more difficult to compete with continuously adapting and temporary networks composed of highly specialised parties. Bit by bit, the piranhas are eating away pieces of the market of traditional companies. On the Internet, where the free market of Adam Smith rules with invisible hand, ‘piranha’ firms have an indisputable advantage (Caspers, Hosman & Verkerk, 1999).

7. The role and competency profile of the network convener

In the preceding paragraphs, the role of the leader of the temporary network has repeatedly been touched upon. As there is a producer in the theatre and movie world, and as there is a head contractor in the building industry, even so there is a person or organization that collects the parties and guides them in the process to reach a common goal in the network.

It’s the role of this ‘convener’ (Schein, 1985, p.70) – mostly a facilitating and moderating leader – to create conditions that allow the involved parties not to lose sight of their ‘reason to be’ and to collaborate on a shared task. A modern term for this convener is a transaction or net broker (Hatch, 1995, mentioned in Franke & Hickmann, 1999).

He/she acts as a facilitator and catalyst who helps enterprises to construct strategic partnerships, to organize network activities and to identify new business opportunities. Whatever the name may be, the leader of a temporary collaborative network ideally possesses a number of competencies that are specific to a convener (Schruijer, Taillieu & Vansina, 1998). In addition, the leader of a temporary collaborative network has to keep an eye on the psychological boundaries and dilemmas that are ever present.

The convener has to make the parties aware of their 'scripts' – for an important part determined by their own organizational culture and identity. These can then be openly discussed, accepted or rejected by the parties (cf. task boundary).

On the one hand he/she can create conditions that allow parties to rapidly co-create a new script together without having to give up their home values and identities in the process. An intuitively easy but hard to realize solution could be that the convener brings together similar organizational cultures.

On the other hand, the convener can – through his/her experience – suggest an own 'basic script' of how the collaboration must take place. This can then be accepted or rejected by the potential collaboration. The parties, can then fill in this 'basic script' with more detail and the convener can facilitate this process if necessary. This partly meets the danger and consequences of under-identification.

Jazz musicians brought together by coincidence can play magnificent music in a nick of time. At first sight, it seems as if they operate in complete freedom and can see each other even blindfolded. However, there are minimal rules ('script') in this 'freedom' on which they can count and fall back while playing. When they play, there's a lot of interaction too, they constantly look at each other. In this way they can produce several variations on themes already played before, and organize for new sounds and combinations in an automatically created but carefully designed space to improvise.

The convener also sees to it that the inevitable power differences between the collaborating parties are neutralized so they cannot negatively affect the problem formulation and solution process (cf. political and authority boundary). Creating process conditions can facilitate this. Parties have to mutually recognize each other, realize that there is more needed than only the pursuit of their own interests and show respect for each other (cf. identity boundary) The convener can help them in this endeavor.

If coalitions are formed, they may not interfere with the interests of the whole network. Therefore, the convener is best viewed as someone neutral or as someone who is serving an overarching interest that transcends the interests of the parties. Often, the easiest way to arrive at the necessary trust is when the convener is connected to the reputation of an institution (cf. institutional trust).

Anxieties, uncertainties and tensions partly caused by the frequent shift of enterprises in the network can be contained by the convener and can be passed on in an acceptable and 'workable' format to the parties involved. Once this kind of buffering has taken place, the partners in the network can process information about the new situation by themselves and act upon it in a suitable manner.

The convener also facilitates the 'co-creation' of a minimal structure in which two-sided and open communication, mutual testing of information, bilateral definition of the task, open confrontation and tolerance for mistakes, are possible (Argyris, 1996). In doing so, regression of the ego is limited in service of the group. Lowering capacities or holding back competencies can be useful for a party to integrate in a network but is best restricted because the best competencies have to be used in short term.

It is important that the parties stay focused on the collaboration goal (cf. task boundary). The convener can see to it that not one party dominates (cf. political boundary). That's why communication and conflict handling competencies are so important. The convener typically calls attention to the construction of ground rules that are to be used when the parties interact. Formulating such ground rules is a common task for the whole

of the network when they first start working, but it is the convener who makes sure that this topic is discussed and that the rules become somehow formalized.

Other important skills for the network convener are time management and, if needed, fund raising or budgeting ((re)distribution of available means).

Classical theories of leadership do not apply to the convener role. As there is no clear organizational chart, position power becomes less important. Typical for the temporary network is that it is based on voluntary collaboration, which implies that there are no hierarchical relations through which authority can be used. Also technical expertise will not necessarily contribute to the convener's function or may even be counterproductive for acceptance by the network members. Input on the content is often not valued or is seen as a political move to the advantage of some parties over others. Process directivity however, is likely to be beneficial to the advancement of the collaboration in the network. Therefore, the role of the convener is more that of the process consultant who works on the conditions in which the different stakeholders can work together. In terms of leadership, coaching, transformational leadership (Bass, 1990a) and service leadership forms the most suitable vocabulary for convening temporary collaborative networks.

8. Conclusion

Forms of collaboration work or fail with the people that create them. Especially three psychological concepts – trust, loyalty and identity – are important for the success of a 'network of people'. Temporary collaborative networks facilitated by ICT are put forward with a lot of enthusiasm as the solution for many problems that contemporary organizations have to deal with. This clearly needs to be played down because lots of psychological dilemmas and questions arise once we look at this new organizational activity from a psychological perspective. The leadership these networks need surely isn't the 'almighty' leader but rather process facilitators who let people co-create the network themselves, and facilitate and encourage shared leadership. Indeed, this facilitates the growth of a 'learning network'.

The technological possibilities that make temporary collaborative networking possible will keep increasing! However, with the implementation of new technologies one always has to ask the following question: 'Where do we want to go as an organization?'. Formulating a desired organization image seems necessary. The new images of organization can help this process. Innovative companies ask for creative people. Creativity originates through interaction between people in an environment that is characterized by safety, positive stress and play. Surely, a group is more creative than an individual. But still, we see a movement in the opposite direction: people have less social contact and work more and more from their PC screens. If one wants to motivate people, if one wants that people collaborate, we can repeat the former argument. The question is whether humans still can or want to follow the technology. Surely, we believe that collaborating is and stays essentially a relational activity. Human imagination and social interaction skills seem to be the limits, not the technological possibilities.

References

- Adair, John (1990), *Not bosses but leaders: how to lead the successful way*. Guildford (UK): Talbot Adair press.
- Argyris, C. (1996), *Leren in en door organisaties. Het hanteerbaar maken van kennis*. Schiedam: Scriptum Books.
- Ashkenas, R., Ulrich, D., Jick, T., & Kerr, S. (1995). *The Boundaryless Organization*. San Francisco: Jossey-Bass.
- Bass, B.M. (1990a), From transactional to transformational leadership: learning to share the vision. *Organizational Dynamics*, 18(3), 19-36.
- Bouwen, R. (1994). Onderzoek als interventie en interventie als onderzoek. Een sociaal constructionistische methodologie voor organisatieverandering. *Gedrag en Organisatie*, 7, 6., 367 - 387.
- Bouwen, R. (1996), *Organisatiepsychologie*. Leuven.
- Bouwen, R., & De Witte, K. (1996), Van Organisatievormen naar Relationele Netwerking. In R. Bouwen, K. De Witte & J. Verboven (red.), *Organiseren en veranderen* (pp. 367 - 378). Leuven: Garant.
- Bridges, W. (1995), *Jobshift: de vaste baan gaat eraan*. Zaltbommel: Thema. Uitgeverij Schouten & Nelissen.
- Byrne, J.A. (1993, 20 december), The horizontal corporation. *Business Week*, 44 - 49.
- Caspers, J., Hosman, G., & Verkerk, S. (1999), *De Piranha-economie. E-commerce: strategie, markten en toepassingen*. Addison - Wesley Longman.
- Dukerich, J.M., Kramer, R., & McLeanParks, J. (1998), The Dark Side of Organizational Identification. In D.A. Whetten & P.C. Godfrey (Eds.), *Identity in Organizations. Building Theory Through Conversations* (pp. 245 - 256). London: Sage.
- Franke U., & Hickmann B. (1999), *Is the Net-Broker an Entrepreneur? What Role does the NetBroker play in Virtual Webs and Virtual Corporations?* Internetdocument. From the WWW on February 12, 2000: http://www.virtual-organization.net/files/articles/Franke_US.pdf.
- Gioia D.A. (1998), From Individual to Organizational Identity. In D.A. Whetten & P.C. Godfrey (Eds.), *Identity in Organizations. Building Theory Through Conversations* (pp. 17 - 31). London: Sage.
- Handy C. (1989), *The Age of Unreason*. London: Business Books.
- Handy C. (1995), Trust and the Virtual Organization. *Harvard Business Review*, mei - juni, 40 - 50.
- Hirschhorn L., & Gilmore T. (1992), The New Boundaries of the 'Boundaryless' Company. *Harvard Business Review*, May-June, 104 - 115.
- Igbaria M., & Tan M. (1998), *The Virtual Workplace*. Hersey & London: Idea Group Publishing.
- Kanter R.M., Stein B.A., & Jick T.D. (1994). *De uitdaging van organisatieverandering. Hoe bedrijven verandering ervaren en hoe leiders verandering kunnen sturen*. Schiedam: Scriptum Books.
- Lewin K. (1951), *Field Theory in Social Science*. New York: Harper and Row.
- Meyerson D., Weick K.E., & Kramer R.M. (1996). Swift Trust and Temporary Groups. In R.M. Kramer & T.R. Tyler, *Trust in organizations: frontiers of theory and research* (pp. 166 - 195). London: Sage.
- Mirvis P.H., & Hall D.T. (1994), Psychological success and the boundaryless career. *Journal of Organizational Behavior*, 15, 365 - 380.
- Morgan G. (1986), *Images of Organization*. Newbury Park, CA: Sage Publications.
- Morgan G. (1993), *Imagination. The Art of Creative Management*. Newbury Park, CA: Sage Publications.
- Morton M.C. (1996), Werk en organisatie in de 21^{ste} eeuw. *HRM-select*, 2, 70 - 83.
- Mowshowitz A. (1997), Virtual Organization. *Communications of the ACM*, 40, 9, 30 - 37.
- van Aken J.E. (1998), De virtuele organisatie en andere organisatienetwerken. *Bedrijfskundig vakblad*, 1, februari, 10 - 15.

- Rousseau D.M., Sitkin S.B., Burt R.S., & Camerer C. (1998), Not so different after all: a cross-discipline view of trust. *Academy of Management Review*, 23, 3, 393 - 404.
- Schein E.H. (1985), *Organizational Culture and Leadership*. London: Jossey - Bass Limited.
- Schneider S.C. (1999), Humaan en inhumain: zin en onzin. *HRM-select*, 4, 59 - 68.
- Schruijer S., Taillieu T., & Vansina L. (1998), 'Leadership' in collaborative task-systems. Paper presented at the Fifth International Conference on Multi-Organizational Partnerships and Co-operative Strategies, July 6 - 8, Oxford.
- Slagmolen B. (1996), *Grenzeloos organiseren*. Internetdocument. Afgehaald van het WWW op 6 augustus 1998: <http://www.diodines.nl/clout/1996/articles/columns/slagmolen.html> .
- Swinnen S. (2000, 8 & 9 januari), Van hiërarchie naar spaghetti. *Job@*, p. 5.
- Venkatraman N. (1994), IT-Enabled Business Transformation: From Automation to Business Scope Redefinition. *Sloan Management Review*, 35, 2, 73 - 87.
- Watzlawick, P., Weakland, J.H., & Fisch, R. (1974), *Change*. New York: Norton.
- Weick, K.E. (1979), *The social psychology of organizing*. New York: McGraw-Hill, Inc.
- Zimmermann, F-O. (1997), *Structural and Managerial Aspects of Virtual Enterprises*. Internet document. From the WWW on December 23, 1999: www.uni-siegen.de/others/student/vwi/vision/virteng.htm .